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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jeffrey W. Yeo

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EXAMINER

LAU, TUNG S

ART UNIT

PAPER NUMBER

2863

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DELIVERY MODE

05/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/775,761	YEO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tung S. Lau	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/23/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Amendment to the abstract**

1. Amendment to the abstract filed on 04/23/2007 has been accepted by the examiner.

### **Claim Objections**

2. Claim 23 is objected as this system claim is depend on a method claim 1, the examiner assumes it is depend on a system claim 11, correction is required.

### **Information Disclosure Statement**

3. Information Disclosure Statement filed on 04/23/2007 is acknowledged by the examiner; A copy of a signed PTO-1449 or PTO/SB/08 attached with this office action.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Carr  
(U.S. Patent 6,968,295, Filed Dec. 31, 2002).

**Regarding claim 1:**

Carr discloses a method of identifying at least one unknown energy driver (Col. 17, Lines 9-34), the method comprising: receiving quantity metadata and energy usage data (Col. 16, Lines 34-56); receiving a time interval (Col. 24, Lines 17-26, lines 39-48); determining at least one relationship between the quantity metadata and energy usage data by analyzing the quantity metadata and energy usage data (Col. 16, Lines 34-56); assessing the quality of the at least one relationship (Col. 16, Lines 34-56) to determine the quantity metadata contributing to the determined at least one relationship (Col. 31-32, Lines 54-29), identifying the at least one energy driver from the quantity metadata contributing to the determined at least one relationship (Col. 16, Lines 34-56) by comparing the quantity metadata contributing the determined at least one relationship with a predetermined list of potential energy drivers (col. 32, lines 47-67, compare before and after tune up), wherein energy consumption is at least based on the at least one energy driver (Col. 16-17, Lines 34-34, col. 32, lines 47-67); and outputting the identified at least one energy driver (Col. 16-17, Lines 34-34), wherein the outputted at least one energy driver is a variable that influences the energy consumption and influences the energy usage data (Col. 31-32, Lines 54-38); calculating a cost from the identified at least one energy driver (col. 33, lines 8-21), controlling the identified at least one energy driver to reduce the cost of energy usage from the identified at least one energy driver (col. 32, lines 47-67, after tune and before tune up).

**Regarding claim 11:**

Carr discloses a system for identifying unknown energy drivers in an energy distribution network (Col. 17, Lines 9-34, fig. 1), the system comprising: an energy drivers application (Col. 4, Lines 14-64), the energy drivers application having; an input module operative to receive quantity metadata, predetermined energy driver quantities (Col. 24, Lines 17-31), energy usage data (Col. 4, Lines 14-64), and a time interval (Col. 24, Lines 17-26); a processing module coupled with the input module and operative to determine at least one relationship by analyzing the quantity metadata and energy usage data during the time interval (Col. 4, Lines 14-64, Col. 16, Lines 34-56, Col. 24, Lines 17-26), the processing module being further operable to assess the quality of the at least one relationship to determine the quality metadata contributing to the determined at least one relationship (Col. 31-32, Lines 54-38) and identify the at least one energy driver based on the quantity metadata contributing to the determined at least one relationship (Col. 16, Lines 34-56) and based on a comparison with a list (col. 32, lines 47-65) predetermined energy driver quantities (col. 32, lines 47-65, list of item to tune-up and return on investment); wherein the at least one energy driver influence energy consumption (Col. 17, Lines 9-33) and influences the energy driver usage data (Col. 31-32, Lines 54-38); and an output module coupled with the processing module and operative to output the identified at least one energy driver (Col. 16-17, Lines 34-34), a rate engine coupled with the operative to calculate a cost of energy usage based on the identified at least

Art Unit: 2863

energy driver and further operative to reduce the cost energy usage (col. 32, lines 47-67, calculate based on tune-up, before and after).

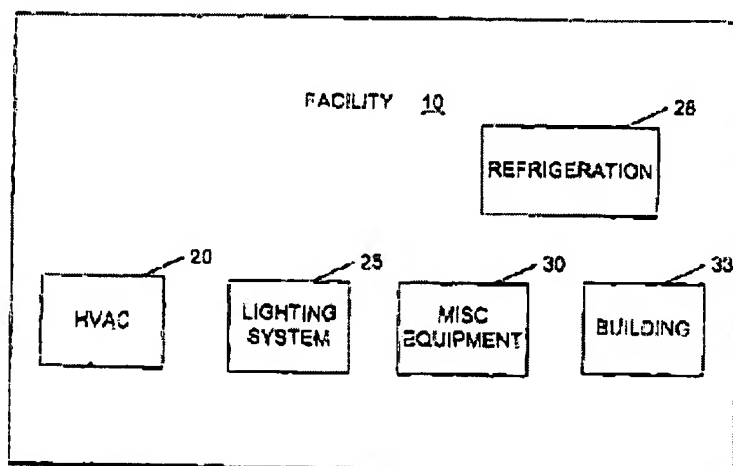


FIG. 1

**Regarding claim 24:**

Carr discloses a system for identifying unknown energy drivers in an energy distribution network (Col. 17, Lines 9-34), comprising: means for accepting quantity metadata and energy usage data associated with consumed energy (Col. 17, Lines 9-34, fig. 1); means for determining at least one relationship by analyzing the quantity metadata and energy usage data (Col. 17, Lines 9-34); associated with consumed energy within a predetermined time interval (Col. 24, Lines 17-26); means for assessing the quality of the at least one relationship to determine the quantity metadata contributing to determined at least one relationship (Col. 16-17, Lines 34-34); means for identifying the at least one energy driver from the quantity metadata contributing to the determined at least one relationship; and influencing the amount of the consumed energy and energy

usage data (Col. 31-32, Lines 54-29); and means for outputting the identified at least one energy driver (Col. 16-17, Lines 33-34); and means for monitoring the identified at least one energy driver to manage energy usage (Col. 24, Lines 17-31); means for calculating a cost associated with operation of the at least one energy driver (col. 32, lines 47-67, turn-up); mean for controlling the identified at least one energy driver based on the cost of energy from the identified at least energy driver (col. 32, lines 47-67, turn-up simulation)

**Regarding claim 25:**

Carr discloses an energy drivers application implemented on a computer (Col. 8, Lines 21-37), the computer having a processor and a memory coupled with the processor (Col. 8, Lines 21-37), the energy drivers application comprising: first logic stored in the memory and executable by the processor and operable to accept quantity metadata a list of potential energy driver (col. 32, lines 47-67) and energy usage data (Col. 8, Lines 21-37, Col. 16, Lines 34-56); second logic stored in the memory, executable by the processor and coupled with the first logic (Col. 17, Lines 8-31), and operable to determine at least one relationship by analyzing the quantity metadata potential energy usage data and comparing with the list of potential energy driver (Col. 24, Lines 17-31, col. 32, lines 47-67, tune-up list), the second logic being further operable to assess the quality of the at least one relationship to determine the quantity metadata contributing to the determined at least one relationship (Col. 31-32, Lines 54-38) and further identify the at least one energy driver from the quantity metadata contributing to the

determined at least one relationship wherein the at least one energy driver comprises a variable influence energy usage data (Col. 19, Lines 45-67, Col. 31-32, Lines 13-38), the second logic further operative to calculate a cost from identified at least one energy driver (col. 33, lines 8-21, cost of hours) and third logic stored in the memory, executable by the processor and coupled with the second logic, and operable to output the at least one energy driver (Col. 19, Lines 45-67), and fourth logic stored in the memory, executable by the processor and coupled with the third logic, and operable to monitor the at least one energy driver for management of energy usage (Col. 24, Lines 39-48) and further operable to control the identified at least one energy driver based on the cost of the at least one energy driver (col. 33, lines 7-21, cost of driver at hourly based).

**Regarding claim 26:**

Carr discloses an energy drivers application for use in an energy distribution network (fig. 1, abstract), comprising: an input module operative to accept quantity metadata and energy usage data (Col. 1, Lines 25-67); a processing module coupled with the input module and operative to determine at least one relationship by analyzing the quantity metadata and energy usage data (Col. 8, Lines 21-37) within a chosen time period (Col. 24, Lines 17-26), the processing module being further operable to assess the quality of the at least the relationship through statistic analysis (Col. 17, Lines 16-21) and identify the at least one energy driver from the quantity metadata contributing to the determined at least one relationship wherein the at least one energy driver comprises an



external factor affecting energy consumption and the energy usage data (Col. 16-17, Lines 34-34, Col. 31-32, Lines 54-38); and an output module coupled with the processing module and operative to output the identified at least one energy driver (Col. 17, Lines 7-34), and a cost associated with the identified at least one energy driver (col. 33, lines 7-21), and a control module coupled with the processing module and operatively to control the identified at least one energy driver to reduce the cost of energy usage (col. 32, lines 47-67, tune-up energy usage).

Regarding claims 2, Carr discloses predetermined list of potential energy driver including know variable effecting energy usage (col. 32, lines 47-67, energy before and after tune up); Regarding claims 15, Carr discloses to manage energy driver usage by monitoring at least one energy driver (fig. 43); Regarding claims 3, 16, Carr discloses relates to production levels (abstract); Regarding claims 4, 17, Carr discloses production schedules (Col. 5, Lines 32-39); Regarding claims 5, 18, Carr discloses related to process variable (Col. 17, Lines 7-34); Regarding claims 8, 21, Carr discloses generic algorithm (Col. 17-18, Lines 35-60); Regarding claims 9, 22. Carr discloses the energy usage are not ratiometrically linked (Col. 20-21, Lines 65-8); Regarding claims 10, 23, Carr discloses outputting graph (fig. 41); Regarding claim 12, Carr discloses network (Col. 8, Lines 21-38); Regarding claim 13, Carr discloses IED in a network (abstract, Col. 8, Lines 21-38); Regarding claim 14, (Col. 8, Lines 21-38) discloses measuring

device coupled to network (abstract, Col. 8, Lines 21-38); Regarding claims 6 and 19, use of linear regression analysis (Col. 27, Lines 26-46). Regarding claims 7 and 20, use of multivariate regression analysis (Col. 23, Lines 1-50, at least two or more dependent variables using one independent variable).

### ***Response to Arguments***

5. Applicants' arguments filed on 04/23/2007 with respect to the amended claims have been fully considered but they are not persuasive.

A. Applicants argue that the prior art does not show "calculating a cost from the identified at least one energy driver; and controlling the identified at least one energy driver to reduce the cost of energy usage from the identified at least one energy driver" (remarks page 10, lines 12-14, 18-23).

Carr discloses "calculating a cost from the identified at least one energy driver (abstract, a saving can be obtain, col. 33, lines 7-21, cost per hours, col. 32, lines 47-67, a tune-up cost); and controlling the identified at least one energy driver to reduce the cost of energy usage from the identified at least one energy driver (col. 32, lines 47-67)".

B. Applicants continue to argues that the prior art does not show "a rate engine coupled with the output module and operative to calculate a cost of energy usage based on the identified at least one energy driver and further operative to reduce the cost of energy usage" (remarks page 10, lines 24-27).

Carr discloses "a rate engine coupled with the output module and operative to calculate a cost of energy usage based on the identified at least one energy

driver and further operative to reduce the cost of energy usage" (abstract, to reduce to cost, col. 32, lines 47-67, to tune-up to save energy).

C. Applicants continue to argue that the prior art does not show " potential energy drivers or predetermined energy driver quantities used in identifying an energy driver" (remarks page 11, lines 1-2).

Carr discloses " potential energy drivers or predetermined energy driver quantities used in identifying an energy driver" in col. 32, lines 47-67, where a list of potential list of improvement can tune-up and save energy).

D. Applicants continue to argue that the prior art does not show " comparing the quantity metadata contributing the determined at least one relationship with a predetermined list of potential energy drivers." (remarks page 11, lines 3-5).

Carr discloses " comparing the quantity metadata contributing the determined at least one relationship with a predetermined list of potential energy drivers." (In col. 32, lines 47-67, a list of recommended change even with return of investment on performed action after tune-up).

E. Applicants continue to argue that the prior art does not show "an analysis within a time period to determine a relationship between energy usage data and quantity metadata". (remarks page 11, lines 12-13), "determining at least one relationship between the quantity metadata and energy usage data by analyzing the quantity metadata and energy usage data within the time interval." (remarks page 11, lines 19-21).

Art Unit: 2863

Carr discloses "an analysis within a time period to determine a relationship between energy usage data and quantity metadata" in col. 33, lines 7-21, abstract, col. 32, lines 47-67, a hour base cost saving due to tune-up of the plant. Carr discloses "determining at least one relationship between the quantity metadata and energy usage data by analyzing the quantity metadata and energy usage data within the time interval." in col. 33, lines 7-21, abstract, col. 32, lines 47-67, a hour base cost saving due to tune-up of the plant).

Note: the applicants have not responded to the claim objection (claim 23) on the previous office action.

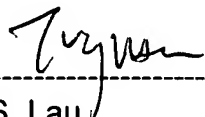
### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Contact information**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Tung S. Lau  
AU 2863, Patent examiner  
May 22, 2007